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MOUNTAIN EXPLORATION IN THE CANADIAN ROCKIES.

SINGULARLY little is known of the wild mountain region lying northwards of the Canadian Pacific Railway, and extending east and west of the Great Divide. Two mighty peaks, Mount Brown and Mount Hooker, marked in most maps as respectively 16,000 and 15,700 feet in height, which rise on either side of the Athabasca Pass, are supposed to dominate this region; and a certain halo of mystery and romance hung over them until in 1893 Professor Coleman of Toronto visited the Pass and pronounced these two mountain giants to be frauds. It was thought, however, that the professor might have been mistaken, and patriotic Canadians were unwilling that the Dominion should abandon without a struggle its claim to possess the highest summits of the Rocky Mountain system. The question involved other geographical and mountaineering problems of an interesting nature, so that when my friend Dr Norman Collie, F.R.S., asked me last spring to join him in an expedition of exploration and surveying in the Northern Rockies, I gladly accepted the invitation.

We started at the end of July from Laggan, a station of the C.P.R. in the heart of the Rockies. The caravan—I beg pardon, “outfit”—consisted of our two selves and Mr Herman Woolley; four men—W. Peyto (head packer), W.

Byers (cook), Nigel Vavasour, and Roy Douglas; thirteen horses, three dogs, and a quantity of tents, provisions, and baggage. We took no Swiss guides. Our route lay northwards through a maze of fallen logs and burnt timber up the valley of the Pipestone Creek; and we spent our first night in camp in a hollow on the banks of the stream. It was terribly hot and the mosquitoes were very active, whilst my first dinner—of fat bacon, bannock, and fried onions, washed down by three cups of strong tea—induced symptoms which for a while made me oblivious of the pleasures of camp-life. After two more days of steady travel, we camped in a pretty spot an hour below the summit of the Pipestone Pass. The heat was terrific, and I tried to bathe in the stream; but before I was half undressed a brigade of “bulldogs” and mosquitoes mustered, and, attacking me “not in single spies but in battalions,” fairly put me to rout. The “bulldog” is a big horse-fly whom Nature has armed with a formidable pair of forceps like scissors, that will sometimes draw blood. The horses suffered terribly from them, and on very hot days I have seen them dripping with blood under their attacks. Still, on the whole, I prefer the “bulldog” to the mosquitoes. The former’s nip may make you swear temporarily, if audibly, but it leaves

no after-irritating effects. We lit "smudges," or fires of damp grass and weeds, to drive them off, but they proved of little use. At midnight a tremendous thunderstorm broke, with torrents of rain, and it was not long before a small stream trickling over my ground-sheet showed me that our well-ventilated *teepee* or Indian tent, which had a big hole at the top, admitted water as well as air. Next morning (Wednesday, 3rd August) we crossed the Pipestone Pass, 8400 feet above the sea. The scenery here was grand but desolate. Huge crags, grotesque rather than beautiful, with cliffs nearly 3000 feet in height, towered on our left. Northwards we could see through the mists the twin summits of Mount Murchison, and it was evident that the height of 15,789 feet which some ancient cartographer, with a fine parade of accuracy, assigned to it, and which still appears in the most up-to-date maps, is a great exaggeration. The weather was cloudy, but it cleared up as the day wore on, and we had no more rain for three weeks. From the head of the pass we descended into the valley of the Siffleur, a tributary of the Saskatchewan, at first through dense scrub of dwarf willow, and then once more through the everlasting pine-woods. The trail improved as we advanced, and we did two good days' march. On the Thursday we saw on our left across the river a fine glacier descending from the flanks of the Murchi-

son group of mountains, and pitched our camp in a pretty basin amid rocky hills. The Siffleur, its waters fed by the melting of the glaciers, had here grown to a good-sized river, and as our horses were all required for the baggage (we had done all the journey hitherto on foot), we had to ford it one by one on Peyto's fine mare, Pet. Byers rode over first, and then Peyto coaxed the mare back; I followed, and the same operation was repeated until we were all safely across. Farther on we found ourselves in a thick forest of tall pines with patches of bad *muskeg*, or marsh. Many of the trunks were rotten and tottering, and one of the horses had a narrow escape from a tree which he bumped against with his pack, and which fell right across the trail, narrowly missing the animal's haunches. Here and there whole clumps had been blown or burned down, and the logs, piled in wild confusion one on another, formed a tangle that made our progress very slow. However, our heavily laden team, though sinking deep in the boggy ground at every step, went gallantly on, headed by Molly, the old bell-mare, with her little foal trotting at her side. Every few minutes we had to halt while the men were cutting out the trail. It was tedious work, for one could do nothing except sit still on a log and scratch one's mosquito bites, listening to the tinkling of Molly's bell and the blows of Peyto's axe as they re-

sounded through the wood. It was what the men called a "very mean trail," though in places it was fairly well defined, and now and then we saw the teepee-poles of old Indian camping-grounds. Matters improved when we emerged into the desolate valley of the North Saskatchewan, and the trail turned to the left westwards across miles and miles of barren hills strewn with burned timber. A fine glacier-covered peak, named by Collie Peak Wilson, closed the view up the valley, the foreground being filled in by the windings of the river through picturesque rocky knolls. Down the valley, where the stream turned abruptly to the north, a murky copper-coloured haze hung over the hills, and told of forest-fires raging in the direction of the Peace river. A few miles away we could see the Kootenay Plains, a well-known camping-ground and market of the Indians in the old days when they traded with the Hudson's Bay Company. We soon reached the Saskatchewan, which owing to the great heat was in tearing flood, and struck an excellent trail up its right or south bank. The word Saskatchewan signifies, I believe, in the Indian language, "The River of Turbid Waters," and the torrent certainly justified its title, as it swept by us like a muddy mill-race 150 to 300 yards in width.

Towards sundown on Saturday evening the wind changed, and the distant smoke-clouds we had observed in the morning came rolling up the valley,

completely obliterating the mountains from view. The air grew suspiciously hot, and as a strong peaty odour assailed our nostrils, our thoughts naturally turned to forest-fires and the chances of our outfit escaping if the valley got ablaze. Woolley humorously announced his intention of going to bed in his boots—a prospect which alarmed me considerably more than the fire, for the head of my bed was dangerously near his feet, and Woolley, who was a great footballer in his day, in his dreams seemed sometimes to fancy that he was playing a fine dribbling game with the base of my skull. However, the night passed without any alarms, and in the morning the sun shone in a fairly clear sky. All the same the thought struck me that death seemed to present itself to the backwoods traveller in a charming variety of shapes, if half the stories one heard were to be believed. Apart from the ordinary risks inseparable from climbing on virgin peaks, we seemed to have a fair chance before us of being burned in our beds, starved, slain by falling trees, or drowned while fording rivers.

Sunday was always our unlucky day, and the 7th August formed no exception to the rule. It was tremendously hot, and, as the Saskatchewan was tearing down in bigger flood than ever, the trail along the bank was in many places under water. The horses were continually floundering about in deep holes, and I noticed that they keenly relished their bathes. Suddenly, as we were rounding a

nasty corner where the bank dropped steeply into the torrent, the soft earth gave way under the feet of one of the pack-horses, and he fell in up to his neck. Finding the water nice and cool, and that it lightened the load on his back, to our horror he coolly swam out into mid-stream, and, after a desperate struggle with the swift current, reached an island separated from us by a channel thirty yards broad. I should explain that these Indian ponies take to the water like ducks, and directly one of the team is seen swimming the others follow suit and plunge in after him. In Morocco, where I have forded some baddish rivers, the animals required much whacking and oburgation to make them enter the water; but in Canada they simply race each other to get in first, and that traveller is wise who packs his kit in perfectly waterproof bags. Thus it happened that Molly the bell-mare, who was always up to mischief, seeing the fun, took a header in after her companion, and her foal promptly followed its dam. The little creature was turned bodily over by the force of the current, and for a moment I thought it must be drowned; but it soon recovered itself, and, striking out pluckily, reached the island, where it shook itself like a dog and trotted after its mamma. It looked as though we should have the whole outfit swimming, but we managed to grab hold of all the remaining horses except one, who made a bolt

for the water and swam gaily across to the three other culprits; and all four started grazing on the island just as if nothing had happened. The language which ensued fairly beat all records in backwoods profanity, and the smoke vapours fairly thickened with curses. The whole thing would have been excessively comic, had the possible consequences been less serious. The impassive Collie said not a word, but he looked more than usually grave; indeed, the prospect of losing our outfit by fire or water seemed the only thing which disturbed his philosophic calm. Apart from the ruin of the trip, we should have been in a pretty fix without our provisions, and seven days' march from home.

The only way to get the delinquents back was to move on with the rest of the team, which we proceeded to do, pitching camp, however, directly we were out of sight round the corner. In ten minutes Peyto came in, furiously whacking the four dripping animals, and, needless to say, we found our bacon, flour, and sugar in a nice mess. In the afternoon the heat grew worse than ever, while every species of insect abomination — mosquitoes, midges, sand-flies, black flies, and bull-dogs — buzzed about us, and I awoke from a nap on a mossy bank to find a tribe of ants on the war-path inside my shirt, and busily engaged in striking a trail down my spinal column. The night was not much cooler, and the mosquitoes, who gener-

ally ceased to worry us in bed, allowed us no sleep. Next day we were forced by the floods up into the woods, where there was no trail, and the men had terrible work with the fallen timber. We hoped to reach Bear Creek, the South or Little Fork of the Saskatchewan, that evening. The scenery grew grander and more alpine as we advanced, and several splendid peaks came into view whenever the smoke-haze lifted. The whole country was very like Switzerland in almost every respect, and the resemblance struck me more every day. The chief difference was that out here the firs grew about 500 feet higher, and there appeared to be no alps or upland pastures above the tree-line. We did not reach Bear Creek till seven o'clock. Our camping-ground was in a magnificent situation at the foot of Mount Murchison, in an amphitheatre of lofty mountains near the junction of the South, Middle (or West), and North Forks. Here, where four valleys, all leading to grand mountain scenery, converge, will probably be the Grindelwald or Chamounix of the Canadian Alps in the time to come, when this beautiful country is better known, and its peaks and glaciers become, as I venture to prophesy they some day will become, the "Playground of America." Of the individual mountains which environed our encampment I shall speak more fully presently.

We spent a day at Bear Creek, as man and beast both required rest, and we had ar-

ranged to make a *cache* there of a considerable portion of our provisions and baggage. As we expected for the remainder of our journey to be continually fording rivers, our saddle-horses would be required, and it was therefore necessary to materially lighten our equipment. Bear Creek itself, a glacier-fed mountain torrent, sixty yards wide, and the worst and most dangerous of these rivers, had to be forded on the morrow; and, as I watched it rushing and foaming over its rocky bed, I cannot say I relished the prospect. However, Peyto was of opinion that even if you got upset you would probably struggle ashore somehow, unless you knocked your head against a stone,— "And then," he added philosophically, "you would die easy."

Early next morning, we mounted our horses for the passage, and had only gone down-stream a few hundred yards when I was appalled to see Peyto trying to ford a place at the head of a rapid run, where the water tumbled and roared amid big stones, and where an upset would have meant certain drowning. Pet, however, wiser than her master, refused to go in above her knees, and we found a much better place lower down, where the stream separated into three channels, and the whole outfit eventually got across without mishap. From here we followed up the main valley, and presently saw on the other side the embouchure of the North Fork, which discharges the meltings of the great snowfields and glaciers

lying to the north. Continuing for about two miles up the stream, which above the junction is called the Middle Fork, we forded it at a place where the water spread out over a big wash-out, nearly half a mile wide; and then, turning down-stream on the north bank, camped in an angle between the Middle and North Forks. Our worst troubles were now about to begin. The Indian trail up the North Fork valley was said to be on the other (east) side of the river, and, as the latter was absolutely unfordable, we should have to force our way up its west bank. As this part of our journey has not been described before in print, I propose to do so in some detail.

Thursday, 11th August.—Did not move camp. Peyto and Nigel went ahead to find or cut a trail; while Collie and I climbed a peak (named by him Survey Peak), about 9000 feet high, to enable him to begin his plane-table survey. After two and a half hours' hot and tedious climb through the woods, battling with fallen logs and mosquitoes, we emerged into the open, and an easy scramble over loose stones took us to the top. The flies followed us far up the mountain side, and we experienced the novel sensation of chopping ice for water with our ice-axes, and being simultaneously bitten by a cloud of mosquitoes and bull-dogs. The same perpetual haze hung over the landscape; no light, fleecy vapours floated in the sky or rolled lazily along the flanks of the hills, but a dull leaden pall seemed to brood, as it were, over

the mountain world. When at intervals it lifted we had glorious views of Mount Forbes (about 14,000 feet), one of the highest and noblest peaks of the Rockies—a sort of cross between the Dent Blanche and the Weisshorn. In a deep valley to the right of the peak lay the blue waters of Glacier Lake, which descend from the enormous Lyell glacier, and discharge themselves by a short stream into the Middle Fork. Southwards we could dimly see the bold rock and snow mountains which cluster round the head of Bear Creek valley, while right above our late camping-ground was the imposing Murchison group, culminating in two peaks, one a long serrated ridge, the other a gigantic square-topped fellow of most formidable aspect, and quite sheer on three sides. The Indians believe Mount Murchison to be the highest in the Rockies, and, though it does not actually exceed 11,500 or 12,000 feet, it is nevertheless a very fine mountain. To the north the view was circumscribed by desolate limestone ranges, with curious rock forms like the Dolomites, one peak having a curious gash or rift cleaving the summit in two.

The next four days were one long battle with woods and muskeags and rivers, during which we only advanced about twelve miles. Had we had less resolute and hard-working men than Peyto and his staff, our trip must inevitably have ended in failure. As it was, we more than once feared we should be forced to turn back. Still, for

us people, who were not obliged to be always log-chopping, the time passed very pleasantly; indeed, our life in camp would have been an ideal one but for the flies, and they only annoyed us for a few days more. The evenings were especially delightful, as we smoked our pipes after dinner on the mossy banks of the river, listening to the swish of the rushing waters and watching the sun go down in a soft mellow haze which irradiated the mountains with its delicate tints. We were right under the great cliffs of Peak Wilson, which rose 6000 feet from the opposite bank to its glacier-crowned summit; and as the sun went down its rays reddened the great towers, bastions, and buttresses of crag, with a rich glow that contrasted sharply with the dense gloom of the intervening canyons. There was not much bird or animal life in the lower forests. An occasional tom-tit, a woodpecker with a voice like a fishing-reel being rapidly unwound, and a few dippers along the river banks, represented the feathered tribe; while the "chipmunk," most engaging of little squirrels, scolding and chattering in the pine branches as you invade his sanctuary, afforded constant entertainment both to men and dogs. We had expected to meet with a few Indians now and then; but I may mention here that, strange as it may seem, we never met a single human being, red, black, or white, during our whole journey, until we were quite near home.

On the 14th, being Sunday, our unlucky day, the horses got lost, and we had a terrible job to find them. The men had a very long day's work, so that evening we dispensed with the teepee and camped in the open air round the fire, beguiling the time with tales of Klondyke and other prospecting yarns. Our men proved excellent company, and Byers in particular, who was a great politician, and a theologian of decidedly advanced views, was a most amusing talker. Next morning, while Peyto and Nigel went ahead in search of the trail, I scrambled up the steep sides of a neighbouring creek with the rifle in search of goat or bear, but without success. At one o'clock the men returned, and dejectedly reported that a mile farther on a big river came in from the west down a wide valley filled with impassable muskeag. It was evident that their tempers were beginning to give way under their manifold trials; but Collie was successful in soothing them with mild words and whisky-and-water. There was nothing for it but to ford the muddy torrent on our right, even if we had to swim for it, or to give up the trip. Peyto was inclined to think that the river was unfordable; but after several plucky attempts he forced his mare across, and the whole outfit followed. The water in mid-stream was within a few inches of the horses' backs; but though the current was very swift the bottom was good, and we all got over with nothing worse than wet legs and damp packs.

Following the wide stony bed of the river for a while, we recrossed it without difficulty above the junction, and camped in the angle between the two streams. The tributary appeared to be fully as large as the North Fork, although it is not marked on the maps. It flows sluggishly eastwards in a deep winding channel, and the valley, which is nearly half a mile wide, was covered with large bogs and lagoons. I walked some distance up it with the rifle, until I was stopped by dense underwood and muskeg, and I noticed that there seemed to be no mountains of any size towards its head, while a fairly well-worn trail seemed to point to its leading to a pass over into the valley of the Columbia. I found no game except a few "fool-hen," or willow-grouse, which were always acceptable additions to our larder. The "fool-hen" is so called on account of its habit of sitting placidly on a low fir-branch, until it is knocked down with a long pole or has its head blown off with a rifle bullet. To show the confiding nature of this bird, I may recount the following anecdote. Collie and I one day each fired four exceedingly bad shots at an old cock with a toy revolver, and it scarcely moved, only ducking slightly when a bullet removed two of its tail-feathers. Finally, as our ammunition was running short, Collie, who seems as much at home on trees as he is on rocks, brilliantly swarmed up the trunk of a neighbouring pine and "potted" the over-

trustful fowl at a distance of five feet.

Next morning we struck a fairly good trail, and all went smoothly—I might have said "swimmingly," for during one of our numerous fordings of the river Pet was carried off her feet in a deep hole. In two minutes the whole outfit had plunged in after her and were swimming about merrily, except two of the lazy ones that I managed to collar. The valley contracted as we advanced, and we bivouacked once more *à la belle étoile* at the foot of a lofty cliff. I was awakened at eleven o'clock by loud talking and laughing, and saw the men trooping back into camp armed with guns, hatchets, lanterns, &c. A large animal, presumably a bear, had been heard moving in the thicket. It turned out to be Woolley looking for a dark place out of the moonlight wherein to change his photographic plates.

Our eighteenth and last day's march was a long one. We left without regret the banks of the Saskatchewan, which had caused us so much trouble and anxiety, and presently saw it emerging from the glacier which forms the source of its main stream. The trail rose rapidly, and we had a steep but delightful ride through a forest of giant pines with trunks of a rich glowing red. Below us a tributary of the Saskatchewan plunged in a magnificent cataract into a deep gorge. Turning westwards, we passed through some pretty park-like glades, and emerged into a flat open valley. We

had passed the watershed un-
aware, for the tiny streamlet
that now meandered peacefully
through the meadows was the
infant Athabasca starting on
its long journey to the Great
Slave Lake and the Arctic
Ocean. Curiously enough the
Saskatchewan rivulet, flowing
down from the opposite hill,
passes within fifty yards of it.
We made our permanent camp
in a charming spot in the
woods at an elevation of 7000
feet. Immediately opposite was
a noble rock and snow-peak
12,000 feet high, which we
called Mount Athabasca; and
a fine glacier, similarly named,
descended to the head of the
valley. The spirits of us three
climbers rose high at the pros-
pect of being once more on the
ice and snow, and we arranged to
attack the peak next day. After
dinner, however, an inspection
of our commissariat disclosed
an alarming state of affairs.
We had flour for five, and
bacon for barely two, days.
Meat must be procured some-
how and soon, or we should
be starved into retreat, and
the trip would result in igno-
minious failure. I therefore
suggested to Collie that I had
better give up the climb and
go in search of mountain-sheep,
or bighorn, which were said to
be fairly plentiful in the sur-
rounding hills; and he said he
would be very glad if I would
do so.

Accordingly, next morning
my two companions started for
Athabasca Peak; while Peyto,
Nigel, and I went hunting to
the north of the camp to the
top of a broad grass-covered

pass (Wilcox Pass), surrounded
by hills of moderate height,
which led over into the main
Athabasca valley. Here we
separated, Peyto going off to
hunt by himself. We had a
splendid view of the dazzling
glacier-clad slopes of Mount
Athabasca, while northwards
was the grandest range of moun-
tains that I had hitherto seen.
Behind it, and overtopping a
scarped rock-peak with a
curious snow-cap or crown,
was a majestic black mass,
which from its situation we
imagined to be Mount Brown.
We had no time, however, to
spend upon scenery, for, while
crossing a patch of soft mud,
we noticed fresh sheep-tracks,
and five minutes later we saw
the animals which made them
moving slowly away across a
wide rocky basin. There were
eighteen of them, mostly ewes
and lambs; but I managed to
make out two rams with fairly
good heads. I was much struck
with the size and noble appear-
ance of the bighorn. His long
legs, smooth tawny coat, and
graceful carriage, are sugges-
tive much more of an antelope
than a sheep. It was mid-
day, and the sheep presently
settled down for their noon-
tide siesta; but the ground
was too open for a stalk, so
we lay there watching them
for two hours. At last they
got up and went off, and
Nigel was for following them
at once; but, remembering how
in chamois-hunting the old doe
sentinel of the herd always pops
up where you least expect her,
and spoils your stalk, I deter-
mined to wait a little. Sure

enough, in five minutes an old ewe appeared on a rock and looked round to see if the coast was clear before making her exit. We followed the animals up a side-valley, Nigel displaying much skill in tracking, until we came to a muddy lake lying at the foot of a fine peak of which he is the eponymous hero. Here we saw the sheep, who had joined another herd, lying on a grassy knoll by the lake. Time was pressing; so I decided to attempt a stalk, leaving Nigel to watch the sheep and to signal to me if they shifted their position. I made a long détour, and coming across two ewes on the way I stalked them — luckily, as it turned out — without success. Meanwhile the herd had evidently seen me; though being a long way off they were not much frightened, but retreated slowly along the shore of the lake up the valley. Hoping to cut them off, I scrambled up the stony hillside as hard as I could, and in half an hour came upon the entire herd browsing peacefully in a hollow below me. The ewes and lambs were over 200 yards distant, but I slithered down the sharp stones thirty yards nearer — to the great detriment of my breeches. A few rams with finely curved horns grazed 60 or 70 yards farther off; but being after meat rather than heads, I decided to leave them alone. It was six o'clock, and I had no time to lose; but, knowing how much depended on the shot, I felt horribly nervous, and my heart was

going thump, thump against my ribs as I fired at the nearest ewe. She sprang up, and, after running fully 200 yards, fell dead. The rest scattered in all directions, and, keeping carefully concealed, I fired several more shots at them as they made off, killing two others, and, unfortunately, wounding as many more. I much regretted the necessity for this slaughter, but the straits we were in left me no alternative. Nigel soon joined me, and we had only gralloched two of our quarry when the approach of night compelled us to make tracks homewards, and it was past ten o'clock when we reached the camp.

Collie and Woolley had not returned, and our men were evidently getting anxious, though I explained to them that when they got more used to the ways of climbers they would not feel alarmed when a party did not come back for dinner. None the less, I was very glad when the flicker of a lantern, like a glowworm in the wood, announced their approach. They had had a splendid rock and ice climb up a difficult *arête*; and since, owing to the time occupied in surveying, it was late in the afternoon when they started from the summit, they had made a somewhat daring dash down a new *arête*. It was a leap in the dark even for two such first-rate mountaineers, but it was justified by success. They reported having seen an enormous glacier and several very fine peaks, the highest of which Collie imagined—wrong-

ly, as it transpired — to be Mount Hooker, and he thought that with a long day's work we might manage to climb it. I certainly had no reason to be dissatisfied with my first day's sport in the Rockies; but the price paid for it was a heavy one, as I undoubtedly missed the finest climb of the trip. Lest, however, the reader should imagine that we were in a kind of sportsman's paradise, I may as well say here that, though I hunted several other days, and kept continually spying *en route*, we never saw another head of game during the whole trip except one small bear! Those blessed bighorn had saved the situation for us; and I shall always regard that day's work as the most remarkable stroke of luck which ever befell me.

The next day Collie and Woolley rested, while Peyto, Nigel, and I brought down the quarry. The following afternoon we shouldered our packs, Nigel and Roy assisting, and bivouacked at the foot of the Athabasca Glacier for an attack next morning on the distant pseudo-Hooker. We took Roy and Nigel, who had never been on a glacier before, for a walk on the ice of the Athabasca before they returned to camp, and they seemed much interested by what they saw. A thunderstorm was growling among the hills to the north, at the head of Athabasca valley, and the vivid lightning flashes kept me awake all night; while I lay listening to the stones trickling down the dirty ice-cliff below us, the loud murmur

of the torrents, now rising in volume, now falling, with the varying gusts of wind, and the occasional roar of an avalanche falling down the sides of Mount Athabasca. We rose at 1.30 A.M., and after boiling our chocolate, started by lantern-light up the glacier, which at first was easy enough. Dawn broke at five in a dark and lowering sky, and the crevasses growing wider and more numerous, kept us dodging backwards and forwards without making much progress; so that I often fancied myself on the Mer de Glace or ascending the ice-fall of the Col du Géant. There were three separate ice-falls, and at the second one we put on the rope, Collie leading, while I, as the weakest vessel of the three, occupied the centre. Collie threaded the mazes of the crevasses and *seracs* with much skill, and they certainly afforded ample scope for mountaineering talent. The *seracs*, or ice-pinnacles, were not particularly striking, but the crevasses were unsurpassably fine. Huge chasms of immense depth yawned beneath us, branching out below into mysterious caverns and long winding grottoes, whose sides were tinged with that strangely beautiful glacial blue and festooned with icicles of all sizes.

We had been going for nearly five hours before we emerged on to the upper glacier, and the wonders of that unknown region of snow and ice were unfolded to me. We were on the edge of an immense ice-field, bigger than the biggest in Switzerland — that is to say, than the Ewige

Schneefeld and the Aletsch Glacier combined—which stretched away for miles like a rolling snow-covered prairie. Here, indeed, we were “alone at the heart of the world.” Out of this elevated plateau great peaks, not packed closely together like the Alps, but sparse and few in number, towered here and there like rocky islets from a frozen sea. To the south was the double-headed Mount Lyell; north of Lyell, and not more than eight miles from us, was a magnificent mountain mass resembling the Finsteraarhorn, which we judged to be nearly 14,000 feet high. We have named this peak, which does not appear on any map, Mount Bryce, after the distinguished author of ‘The American Commonwealth,’ who is now President of the Alpine Club. It is the fashion across the Atlantic to name mountains after people, though we departed from this custom in many instances, notably in the case of the goal of our expedition, the pseudo Hooker, which Collie christened Mount Columbia. This fine snow-peak is unquestionably the monarch of the group. It did not look particularly difficult, but it proved to be much farther off than we thought, and after two more hours’ steady tramp across the snow without reaching its base, we gave it up. We were near the edge of a magnificent *cirque* of frowning precipices formed by Mount Columbia and two fine peaks called the Twins. Retracing our steps, we ascended, after a laborious climb

through the soft snow, a rounded summit (11,700) which we named the Dome. The Dome is not a very striking mountain in itself, but Dr Collie observes that hydrographically it is one of the most interesting in North America. Viewed in this sense it is the very apex, as it were, of the Rocky Mountain Range, for the meltings of its snows descend into three great river-systems, flowing into three separate oceans—to the Columbia and thence to the Pacific; to Hudson’s Bay *via* the Saskatchewan; and by the Athabasca to the Arctic Ocean. It was now three o’clock, and gathering storm-clouds obscured the view, so we ran down the snow as fast as the hidden crevasses permitted to the head of the Athabasca ice-fall. The storm broke before we got off the glacier, and we reached camp that night drenched to the skin.

We still fondly believed that two of the great peaks in our neighbourhood were Brown and Hooker; but the whereabouts of the Athabasca Pass and the lake known as The Committee’s Punch-Bowl seemed more of a mystery than ever, as we could see no pass over the range which was feasible for horses, or, indeed, for men, unless they were practised mountaineers. Mr Wilcox, the author of a delightful book, ‘Camping in the Canadian Rockies,’ was said to have reached the Punch-Bowl, *via* the pass named after him, two years before us; but there is no record of the trip. Moreover, while hunting again one day in

my Wild Sheep Valley and Hills, I had an unusually clear view of the mountains to the north, and made a rough but careful sketch of them; and the result of my observations seemed to be that no pass could possibly exist between any of the peaks near the supposed Brown and Hooker by which any four-footed animal less active than a goat could cross. The solution of the problem seemed as far off as ever, so after a consultation we decided to move half the outfit over Wilcox Pass into the Athabasca main valley. This we accordingly did, leaving poor Roy alone to look after the camp.

The Athabasca flows through a wide valley, covered in most places with an ugly wash-out, which we found, however, very convenient for travelling purposes. The general features of the scenery were less attractive than those of the charming vale we had left, though the mountains here were on a bigger scale, and Athabasca Peak nobly filled the head of the valley. We had hoped to find a lateral glen by which we could reach the foot of Mount Columbia; but the mountains slope on their eastern sides in a continuous line of cliffs, intersected only at places by impassable ice-falls. We, therefore, followed the bed of the stream for some miles, and camped at an elevation of 5600 feet near the mouth of a gorge, down which a creek tumbled in a picturesque cascade. Our men spent the next morning vainly prospecting for gold, and in the

afternoon we took our sleeping-bags and provisions and ascended the gorge, with a view to sleeping out, for some peak of the main range. The stream issued from a glacier descending from a group of mountains with three principal summits, of which the northern one (Diadem Peak) was the curious snow-crowned peak I had seen from Wild Sheep Hills. The central and highest summit was named by Collie after Woolley, and the third after my humble self. Our two peaks appeared to have been sadly misbehaving themselves in bygone ages. A tremendous rock-fall had evidently taken place from their ugly bare limestone cliffs, and the whole valley, nearly half a mile wide, was covered to a depth of some hundreds of feet with boulders and débris. In our united experiences in the Alps, the Himalayas, the Caucasus, and other mountains, we had never seen indications of a landslide on so colossal a scale. Following the edge of the glacier, we bivouacked, our objective next day being Peak Woolley, which we hoped to climb by a steep ice-fall that separated it from Diadem. I made a delicious bed of heather and pine twigs, and slept soundly till I was awoken by the rain pattering on my sleeping-bag. The weather had changed for the worse, and the pale sickly light of an unpromising dawn had overspread the eastern sky when we started up the glacier. All went well as far as the foot of the ice-fall, when a black cloud that had been gathering over Mount

Columbia burst, and heavy rain drove us to seek shelter under a friendly rock. In five minutes it cleared, and we were just putting on the rope for our ascent of the ice-fall, when with a roar and a clatter some tons of ice that had broken off near the summit came tumbling down, splintering into fragments in their descent. The five minutes' delay had been a lucky one, so we took the friendly hint and left that ice-fall alone. The only alternative peak was Diadem, which we climbed in about four hours, three rock-chimneys and some steep rocks near the top affording us a certain amount of diversion. The rocks were not particularly difficult, but great care was necessary, owing to their excessive rottenness. The snow crown proved to be 100 feet high, and from its top (11,600) a wonderful panorama burst upon us, in spite of the murky atmosphere. Standing, as we were, on the Great Divide, we looked down upon a marvellous complexity of peak and valley, of shaggy forest and shining stream, with here and there a blue lake nestling in the recesses of the hills. Quite close, as it seemed, the overpowering mass of the supposed Mount Brown (now called Mount Alberta) towered frowning 2000 feet above us. It was a superb peak, like a gigantic castle in shape, with terrific black cliffs falling sheer on three sides. On almost every side, far as the eye could reach, the world of mountains extended: taken individually, I have seen finer peaks elsewhere,

but what impressed me here was a sense of their seemingly endless continuity. Northwards, as was to be expected, the landscape presented a sterner and more forbidding aspect: indeed, the softer and more homely features of Alpine scenery were everywhere absent. One missed the green pastures dotted about with brown chalets, and the familiar tinkle of the cow-bells would have sounded more musical than ever on my ears,—for, as I think Mr Leslie Stephen observes in 'The Playground of Europe,' these evidences of civilisation improve rather than spoil mountain scenery.

Collie's surveying kept us some time at the top, and bitterly cold work it was. We descended the peak through pelting hail, while the thunder roared and rattled among the crags in grand style, so that we were more than once constrained to halt and throw aside our ice-axes for fear of the lightning. In the woods we were struck with a still worse storm, with hailstones as big as—well, of the usual size—that hurt as they hit you; and again we ran down into camp like three drowned rats. During the night another thunderstorm, the fifth in twenty-four hours, broke over us; but though the drippings from our leaky tent soaked my already damp sleeping-bag, I slept soundly through it all.

In the morning we struck the tents and returned over Wilcox Pass to the camp. Provisions were again running short, so we decided to make tracks homewards, and moved

the tents on the following day a few hours down the valley. Peyto and I started ahead of the others to hunt sheep up a valley leading to the headwaters of the Brazeau river. On the way we found a considerable tract of forest on fire, the charred tree-trunks and half-burned foliage presenting a curious patchwork of green and black, while the peaty earth was still smouldering and emitting volumes of smoke. Two of our men, who had left the caravan to go hunting on the way up, had lit a fire to cook a fool-hen, and had carelessly omitted to perform what is every backwoodsman's first duty—namely, to thoroughly extinguish it. Had the weather been finer the previous week we should probably have found the whole valley ablaze and our retreat down the Saskatchewan cut off—a cheerful prospect for a party with next to nothing to eat! Leaving the fire, we pushed our horses on to the summit of the pass, where we tethered them and descended on foot some distance down the stream of the Brazeau. It was a pleasant valley, with low rounded hills, prettily wooded, on either side, that reminded me of Wales. We saw plenty of tracks, but no sheep, and returned to camp empty-handed, and for the third time soaked to the skin with rain. The morning was gloriously fine, and we made a forced march down the North Fork, so as to reach our *cache* of provisions at Bear Creek as soon as possible. The camp was pitched in a grove of burned trees, some of them

so rickety that a push of the hand sent them over. We were now on very short commons, having no meat and very little bread, and the poor dogs were absolutely starving; but it rained all next day, and we had to remain in camp. We ate our last sardine that evening, reserving three crusts of bread for breakfast on the morrow, when we pushed on as hard as we could down the left bank of the river. Arriving at the main stream of the Saskatchewan, we managed to ford it below the mouth of the North Fork, the cold weather having greatly reduced the volume of water. Bear Creek offered no difficulty. As we neared the *cache*, Collie tried to inflame our imaginations by drawing lurid pictures of a band of Indians gorged with our bacon and roaring drunk on our whisky; but we found everything just as we had left it.

Meat was still very scanty, so I spent most of the next day wandering about the woods of Bear Creek in search of fool-hen. One wants to be perfectly alone to fully appreciate the mystery and the utter solitude of these great forests. The scarcity of bird and animal life serves to heighten the impression of loneliness, and you may walk for hours without hearing a sound except the roar of some distant torrent or avalanche, and the sighing of the wind in the tall pines and the creaking of their gigantic limbs. Only the play of light and shade between the swaying branches causes the imagination at times to people their recesses with

moving shapes and figures, that are curiously lifelike and distinct. The forests of the Selkirks are less desolate, as one sees more birds and beasts, and the vegetation and timber are far more picturesque.

Next morning we tried to climb one of the spurs of Mount Murchison. We had a very bad hour with the logs in the wood, and when we got out into the open above the trees, the weather gave us little encouragement. A tedious shale-slope led up to steep rocks which afforded some interesting scrambles, Woolley manipulating a big jammed stone in a rock-chimney with much skill. We halted for lunch on an *arête* at a height of about 9000 feet. As the mountains were enveloped in mist and it was snowing steadily, we had no view to speak of, but two remarkable phenomena attracted our attention. The first was a tall column of rock that had become detached from the cliff and formed a slender pillar 400 feet high and tapering towards the summit and base. Much more extraordinary, however, was a group of rocks, formed, as it seemed, of petrified tree-trunks with numerous fossilised remains at their base. In his paper read before the Royal Geographical Society on February 13, Dr Collie expresses the opinion that these were really gigantic petrified seaweed. What a tremendous upheaval must have occurred to throw them up here! Nor am I aware of any similar remains having been previously found at so great an elevation.

The weather steadily got worse, so Collie carefully photographed the petrified trees, and we returned to camp.

Sunday, 4th Sept.—Pushed on up Bear Creek towards the Bow Pass. Violent hailstorms, followed by heavy snow, in which we hopelessly lost the trail through the wood. Camped in slush on the edge of a muskeag. Bitterly cold night, with hard frost. The morning was brilliantly fine, and the sun shone in a cloudless sky. Ice crystals sparkled on every leaf and twig, the pails and buckets were all frozen hard, and Byers asked for time to thaw his socks before he could put them on and give us our breakfast. At the summit of the Bow Pass (6700) we left the trail, and, ascending a hill to the right, had a glorious view of Murchison and the Waputehk Mountains. The most striking of these is the Pyramid (about 11,200), whose eastern face descends in an almost sheer cliff 6000 feet high to the valley. Our camp was pitched on the shore of the Bow Lake, a beautiful sheet of water embosomed in high mountains. It is full of big trout, and the whole district, which is well described in Mr Wilcox's book, can be recommended to people with a taste for camp-life.

On Wednesday, 7th September, we had our last climb. Following the northern shore of the lake, we passed the mouth of a remarkable gorge, with a big jammed stone forming a natural bridge, and reached the foot of the Bow Glacier, which descends from

the great Waputehk ice-field. The upper ice-fall proved troublesome, and four or five razor-edged ridges, connected by rickety ice-bridges, and with deep crevasses on either side, gave us the most ticklish piece of mountaineering work which I had during the whole trip. It did not last long, however, and soon we were on the *névé* of the Waputehk, which, though Mr Wilcox errs greatly when he says that it is much the biggest ice-field in the Rockies, is still a very fine glacier. The surrounding peaks do not exceed 11,000 feet, and are not particularly striking in form. The upper slopes of our peak were covered with fresh snow, and we had a terrible grind before we reached the top. Its height was 10,100 feet, and our view was one of the most remarkable I have ever seen, in respect of the multitude of mountains visible. Beginning southwards in this wonderful panorama, the first peak to catch my eye was Mount Assiniboine, the finest and highest south of the railway; next on the right rose Mount Temple and the Laggan group; the Ottertail mountains, and a group of unknown peaks; the Selkirks, with Mount Sir Donald, seventy miles distant, standing up quite clear; the Gold Range; next, and much nearer, the Freshfield group; Mount Forbes, towering above all competitors; the double-peaked Mount Lyell, partially obscuring Mounts Bryce and Columbia; Peak Wilson and the Murchison group; then the Slate Range, with innumerable

smaller summits; while over all was a cloudless sky of more than Italian blue.

Having next to no meat, we had been living practically on bread and porridge; but next evening we caught some fine trout in the Bow river, which took a fly readily, in spite of all we had been told to the contrary. Friday the 9th was our last morning in camp, and it afforded us a little mild excitement in the shape of a bear which was sighted on a hill above the camp. Peyto and I went after him; but he got our wind, and was seen by the party in camp to gallop over a range of hills 8000 feet high into the valley of the Blaeberry Creek. Our troubles were not yet over, as the burned timber in the woods above Laggan were worse than anything we had hitherto seen, the fallen trunks piled one upon another presenting a most extraordinary tangle. There were places where we walked on tree-trunks for some hundreds of yards without ever touching the ground. I cannot help thinking that it would repay the C.P.R. authorities to cut a good trail as far as Bow lake, as the district offers many attractions to sportsmen and fishermen as well as to mountain climbers. How the horses got through it all I don't know, as Collie and I dismounted and walked on ahead of the caravan. The distant scream of a C.P.R. locomotive warned us that we were approaching the haunts of men, and at five o'clock we found ourselves once more at Laggan railway-station. The outfit

arrived an hour later, the men looking like chimney-sweeps from their battle with the burned timber, and we bade a last farewell to our tents and horses. Our life in camp, with its varied incidents and experiences, was now a thing of the past; civilisation, with its feather-beds and *table-d'hôtes*, would claim us for its own, and our difficulties and struggles with woods and rivers and mountains would henceforth be nothing more than a pleasant memory.

After our return to England, Dr Collie and I studied the works of the old Canadian explorers to find out who it was that discovered and named Mount Brown and Mount Hooker, and he eventually unearthed an old and obscure magazine, containing the account of the journey of one David Douglas, which established the identity and loca-

tion of those two semi-mythical giants beyond all question. Hence it is evident that Professor Coleman was right in saying that they are comparatively insignificant summits. It is evident also that the Athabasca Pass does not, as all the maps make out, traverse the main chain of the Rockies, but quite subordinate hills several miles to the west. The main range, therefore, which was the scene of our operations, is virgin ground; and the Columbia Glacier and the peaks rising out of it must be regarded as the true culmination of the northern Rocky Mountain system. Lastly, Mount Brown and Mount Hooker must be deposed from their pride of place as the mountain monarchs of this part of the world, and Mount Columbia, Mount Bryce, and Mount Alberta must reign in their stead.

HUGH E. M. STUTFIELD.